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| <input type="checkbox"/> | L7 | "high protein" and "food processing plant" | 10 |
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L7: Entry 6 of 10

File: USPT

Jun 12, 1990

DOCUMENT-IDENTIFIER: US 4933087 A

TITLE: Recovery of fats and proteins from food processing wastewaters with alginates

Brief Summary Text (3):

This invention relates to purification of wastewaters from food processing plants and particularly relates to use of polysaccharides for flocculation and coagulation of fats and proteins in such wastewaters.

Brief Summary Text (5):

In fish canneries, red meat slaughter and processing plants, and poultry slaughter and processing plants, large amounts of food wastewater, having high protein and fat contents, are produced. These wastewaters are commonly processed by: (a) pretreatment of the wastewaters in a Dissolved Air Flotation (DAF) process which is operated with or without chemical coagulants and flocculants and with air injection under pressure, producing a primary float sludge or "skimmings" (also termed "DAF waste sludge") and/or (b) biological oxidation under facultative or aerobic conditions or biological reduction or fermentation under anaerobic conditions to produce biological sludges.

Drawing Description Text (2):

FIG. 1 is a flow sheet of the basic process for treatment of wastewater from a food processing plant, such as a poultry slaughtering plant, and/or a further processing plant.

CLAIMS:

18. A process for aerobically treating a raw wastewater from a food processing plant, said wastewater containing protein and fat, to produce activated sludges and for treating said sludges with alginates to produce concentrated sludges, comprising:

A. feeding said wastewater to a secondary aerobic biological treatment plant containing aerobic microorganisms in a mixed liquor and admixing said wastewater with said mixed liquor;

B. feeding said mixed liquor to a clarifier and obtaining activated sludge therefrom;

C. admixing a particulate additive selected from the group consisting of finely milled peat, acidified peat, and activated carbon with said activated sludge to produce an admixed sludge;

D. admixing an alginate and an acid with said admixed sludge of said step C to produce a treated sludge having a pH of about 3.0 to about 4.5; and

E. separating a concentrated activated sludge, as recovered sludge, from said treated sludge.